

## COMPUTER WORKSHOP

## INTRODUCTION

Windows XP doesn't have to be installed to a hard disk. With a live CD, you can boot Windows XP from an optical drive. The best thing is that it doesn't install any files on the host PC's hard disk. This is ideal for rescuing a corrupt Windows installation, as you can replace any corrupt files from an external USB flash drive or hard disk. If your Windows installation is beyond repair, you can rescue any important files before reinstalling the operating system or running disk tools.

As the live CD will boot on any PC with an optical drive, you don't even need to carry a notebook with you. All you need is your live CD and a USB flash drive or hard disk for your programs and documents, and you can work wherever there's a PC to run your CD. In this month's *Computer Workshop* we'll show you how to make a live Windows XP CD using the free PE Builder utility.

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# Making a live Windows XP CD

If you have a corrupt Windows installation, loading from a live CD will let you rescue all the files you need. Chris Finnamore explains how to prepare a bootable CD using a free program

**A** PC can load Windows XP from a live CD without writing any files to its hard disk. On a basic level, this can let you access a PC's hard disk, so you can rescue files from a broken Windows installation or delete files and programs left by viruses. You can also make a more complicated live CD that will let you browse the web and run Office applications. We explain how to make both types in the steps below.

Before you begin, you need to download the PE Builder program from [www.nu2.nu/pebuilder](http://www.nu2.nu/pebuilder). You also need your original Windows XP installation disc. The CD must include Windows XP Service Pack 2 (SP2). If it doesn't, you have to slipstream SP2 into the Windows installation. An easy way to do this is to use the nLite program from [www.nliteos.com](http://www.nliteos.com). We explained how to slipstream a Windows XP installation in *PC Builder*, *Shopper* September 2007. The slipstreaming process creates a Windows XP installation folder on your hard disk, which you should use as the source folder for your live CD. You'll also need a blank CD-R or CD-RW to create your bootable live CD.

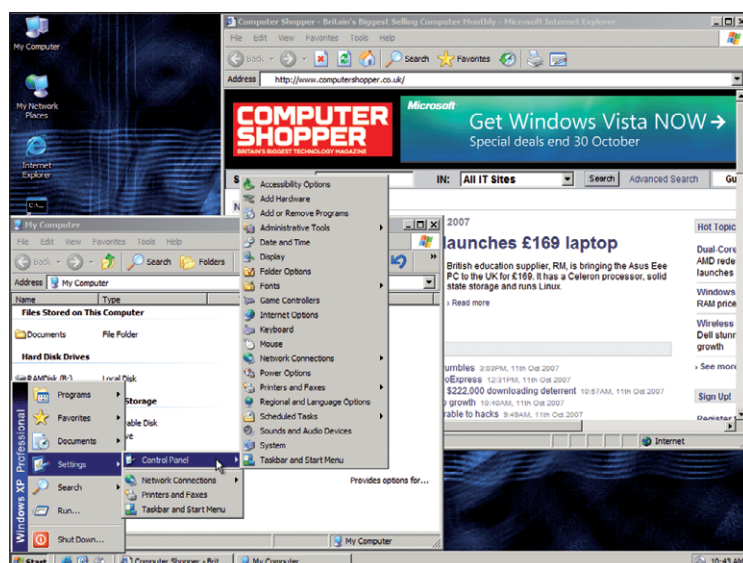
**1** To start, we'll build a simple rescue CD without a full Windows XP desktop, many applications or network support. We'll explain how to create a flashier live CD later. Install PE Builder and run it. In the Source field, type in or browse to the location of your Windows XP installation CD or the slipstreamed XP installation folder. You can set PE Builder to create an ISO CD image which you can burn to a CD yourself, or use PE Builder's own CD-burning utility. To create an ISO, in the media output section click the Create ISO image radio button and click the '...' button. Browse to where you want to create the ISO image and type a name for it, then click Open. To burn straight to a CD, click the Burn to CD/DVD button, then select the CD burner you want to use. If your optical drive isn't recognised, you

can change the CD-burning program using the drop-down box. Once you've selected your CD option, click the Build button. PE Builder will build the live CD and either create an ISO or burn it to CD.

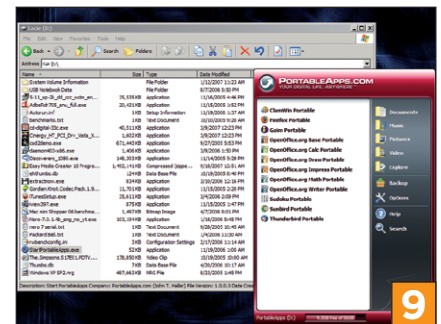
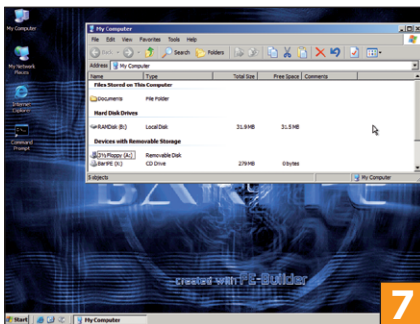
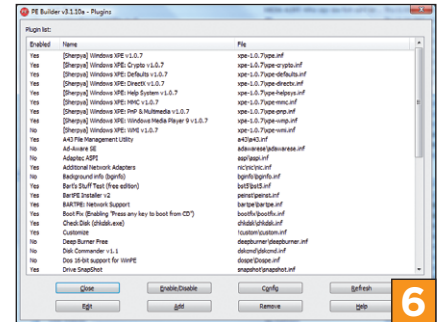
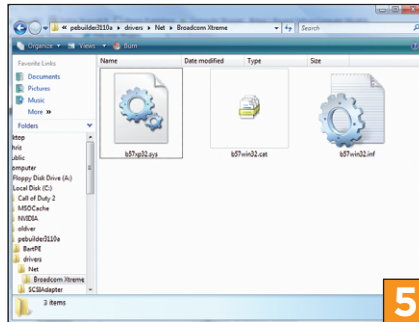
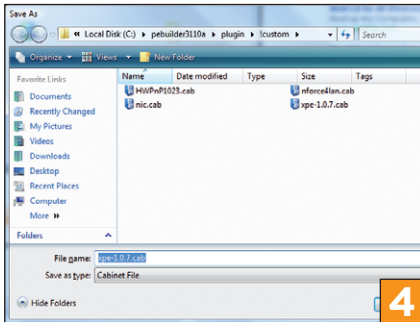
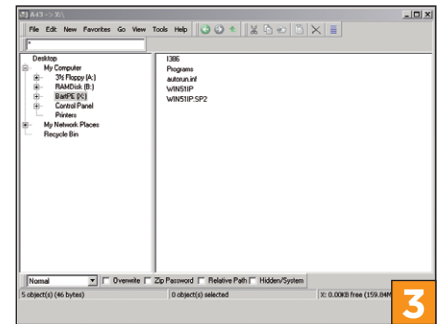
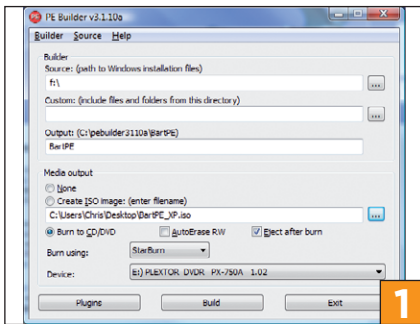
**2** You now have a bootable CD. Before booting from the CD, you must ensure your PC is set up to boot from the optical drive before the hard disk. Go into your PC's BIOS and find the Boot menu. Change the boot order so the optical drive is before the hard disk, then save the changes and exit. Put your live CD in the drive. The PC will boot into the cut-down Windows XP desktop. The basic live CD doesn't support plug and play, so it won't recognise USB flash drives or hard disks you plug in after booting. To use external storage, plug in any devices before you boot from the live CD.

**3** The Bart PE desktop has a few utilities, but the most useful is the file manager application, which lets you copy files from your hard disk. It also lets you delete files from the hard disk that would be locked when the main operating system is running. This is useful if you want to delete virus files that your virus checker cannot remove. Click the Go button, go to Programs and run the A43 File Management Utility. This is a simple graphical file-management program with your disk drives displayed in the left pane of the window and files on the right. It's ideal for recovering files from a corrupt disk that won't start Windows.

**4** The standard Bart PE live installation is useful, but it's also possible to make a live CD with most of the features of a full Windows XP installation. To do this, you must take advantage of some of the plug-ins available for PE Builder. For a live CD with a full Windows desktop, you need the Windows XPE plug-in from <http://oss.netfarm.it/winpe>. Save the file to the !custom



◀ The end result: The Shopper website after booting from the live CD



folder in the plug-in directory in the pebuilder folder on your hard disk.

There are many other plug-ins available for the PE Builder program to add extra features. Searching the web for PE Builder plug-ins will guide you to websites hosting the plug-ins and explanations about what they do. Most plug-ins are .cab files, which you can save straight to the plug-ins folder, but some are in .zip archives, which you must extract before they'll work. One of the most useful is the HWPnP plug-in, which will detect USB flash drives when you plug them into the PC running the live XP CD. Get it from [www.paraglidernc.com/plugins/plugins.htm](http://www.paraglidernc.com/plugins/plugins.htm).

**5** To browse the web or access shared folders on your network with your live CD, you must add your PC's network card drivers to the live CD. Download the drivers for the network card from the manufacturer's website. Go to the drivers folder in the pebuilder directory on your hard disk, open the Net folder and create a folder within it with your network card's name. Copy the network card drivers to this folder. The driver files must be loose in the folder; PE Builder won't recognise the drivers if they are in a .zip archive.

**6** Open PE Builder and set the location of the Windows installation files and the CD burning options as in Step 1. Before you click the Build button, you'll need to change the plug-in settings. Click the Plugins button. This brings up a list of the plug-ins currently used in the live CD, and whether they are enabled or not. You'll need to add the plug-ins you downloaded manually. Click the Add button, then browse to the

!custom folder in the pebuilder directory where you saved the plug-ins. Now click on the plug-in you want to add and click Open. You can enter a folder name for the plug-in, or leave the default. Click OK. The plug-in will be added and enabled by default. To make the enhanced live CD with the Windows XP desktop, you must add the XPE plug-in and the HWPnP plug-ins.

The plug-ins you added are enabled by default, but you have to disable the live CD's default interface for the XPE interface to load. Scroll down the plug-ins list until you find the Nu2Shell plug-in. Click Enable/Disable to turn it off. Find the Startup Group plug-in and disable it. Click Close, then click Build to build the live CD.

**7** When you boot from the enhanced live CD, it loads a full Windows XP desktop. You may be prompted to insert your Windows XP Professional CD to install a driver. If so, click the Browse button and navigate to X:\I386\System32\Drivers to install it. The desktop works like Windows XP. You can browse physical hard disks on your PC or surf the web with Internet Explorer if you've installed the appropriate network drivers. XPE recognises any USB flash disks you plug in when it's running. Autoplay is disabled, so you must browse to the flash drive in My Computer. To use a hard disk with XPE, you should plug it in before you boot from the CD, as XPE doesn't always mount external USB hard disks properly.

**8** While the enhanced boot disk lets you surf the web and makes it easy to manage your files, there isn't much software included

and, as the operating system runs from a CD, you can't install any more programs on the PC. You can get around this by running your programs from an external USB drive. You can't just copy the programs from your main PC to an external drive and expect them to work, though, as most Windows applications require extra files in the Windows directory and entries in the Windows Registry to work.

The PortableApps project gets around this by altering applications so they run directly from an external disk, without needing additional files. There are many applications at <http://portableapps.com>, but the easiest way to add a set of useful programs is to use the PortableApps.com Suite and install it to a 1GB flash drive. This gives you the Firefox web browser, the Thunderbird email client, the Sunbird calendar program and the OpenOffice suite of office programs. You can also install the applications to an external hard disk for extra storage and faster performance.

Download the Standard edition of the PortableApps.com suite, then run it. Choose where you want to install the applications, then click Install. The applications will take a while to install, especially on a USB flash drive.

**9** Plug the USB drive or hard disk into your PC, then boot from the live CD. Once it's loaded, browse to the external drive and double-click on StartPortableApps.exe. The applications will pop up in a menu on the right of the screen, so simply click on the one you want to launch. The PortableApps program will have created a folder called Documents on your external disk where you can save your files. **CS**